

5,168,018 (Yoshizawa) in view of U.S. Patent No. 4,372,823 (Church).

Each of claims 1-28 requires active particles of about -200 mesh or smaller that are suspended in a fluid medium.

Yoshizawa discloses a battery having an anode formed of zinc particles. (Yoshizawa col. 2, lines 55-58). As admitted by the Examiner, Yoshizawa does not disclose the shape or mesh size of the zinc particles in his anode. (Office Action at page 3). Therefore, Yoshizawa does not disclose or suggest active particles of about -200 mesh or smaller that are suspended in a fluid medium, as required by claims 1-28.

Church does not cure the deficiencies of Yoshizawa. Church discloses a battery having an anode that includes zinc particles. (Church col. 1, lines 12-15). Church discloses that the zinc particles are from 5 microns to -325 mesh, but he also discloses that the zinc particles are bonded to a current collector to form the anode. (Church col. 2, lines 45-54). The anode is then immersed in an aqueous alkaline electrolyte solution during use. (Church col. 3, lines 52-53). Church provides no indication that the zinc particles do not remain bonded to the current collector when the anode is immersed in the alkaline electrolyte solution. Instead, by always referring to the anode as being a solid element, Church indicates that the zinc particles remain bound to the current collector. (Church Figs. 1-3). Thus, Church does not describe or suggest active particles of about -200 mesh or smaller that are suspended in a fluid medium, as required by claims 1-28.

There is no suggestion to combine Yoshizawa and Church. Rather, because Yoshizawa discloses that his battery provides excellent characteristics (Yoshizawa column 1, lines 11-12), one skilled in the art would not be motivated to modify his battery by combining it with Church's battery. Similarly, Church discloses that he provides an improved battery (Church column 1, lines 12-13), so one skilled in the art would not be motivated to modify his battery by combining it with Yoshizawa's battery. Moreover, since Yoshizawa uses zinc particles suspended in a fluid medium, and Church uses zinc particles bended to a current collector, a person of ordinary skill in the art would not look to Church for guidance in making anodes like those described by Yoshizawa.

It is well established that a suggestion to combine the references must exist for a claimed invention to be rendered obvious under 35 U.S.C. § 103. For example, in Ex parte Clapp, 227 U.S.P.Q. 972, 973 (Bd. App. 1985), the Board commented:

To support the conclusion that the claimed combination is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed combination or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed combination to have been obvious in light of the teachings of the references.

Furthermore, even if Yoshizawa and Church were combined, the result would not correspond to the subject matter of claims 1-28. Rather, the result would be an electrode that did not have particles of about -200 mesh or smaller that were suspended in a fluid medium.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 103.

The Rejections under 35 U.S.C. § 112, Second Paragraph

Claim 10 was rejected under 35 U.S.C. § 112, second paragraph for containing an improper Markush group. During the conversation with the Examiner on December 21, 1998, the Examiner agreed that the amendment to claim 10 presented in the preliminary amendment obviated this rejection.

Claim 28 was rejected under 35 U.S.C. § 112, second paragraph for failing to set forth any method steps. However, in contrast to the Examiner's assertion, claim 28 requires the step of accumulating ions on the surface of active particles.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. § 112, second paragraph.


Conclusion

Applicants believe that the application is in condition for allowance, and such action is requested.

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Respectfully submitted,

Date: 3/1/99


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